

Claims

1. A door lock for electrical household appliances, such as washing machines, dishwashers and tumble driers, for example, with:
rotatable components and/or contacting surfaces which are displaceable relative to one another, which cooperate during transitions from a closed position for the door lock to an open position for the door lock and from the open position to the closed position, characterised in that the rotatable components are rotatable in such a manner, and/or the contacting surfaces displaceable relative to one another are constructed in such a manner, that forces required during a transition from the closed position to the open position essentially correspond to forces required for a transition from the open position to the closed position.
2. A door lock according to claim 1, characterised in that the rotatable components are rotatable in such a manner, and/or the contacting surfaces displaceable relative to one another are constructed in such a manner, that forces acting in bearings for the rotatable components and/or between the contacting surfaces displaceable relative to one another during transitions from the closed position to the open position essentially correspond to forces acting during a transition from the open position to the closed position.
3. A door lock according to claim 1 or 2, characterised in that the rotatable components are rotatable by means of a bearing and/or the contacting surfaces displaceable relative to one another cooperate by means of bearings arranged between said surfaces.

4. A door lock for electrical household appliances, such as washing machines, dishwashers and tumble driers, for example, with:

- a contact region (30) and

5 - a gripping device (18) with an active region (22), which in an open position of the door lock contacts the contact region (30) and in a closed position of the door lock cooperates with the contact region (30) in order to maintain the closed position,

10 characterised in that

- the contact region (30) and/or the active region (22) are constructed in such a manner that forces required during a transition from the closed position to the open position essentially correspond to forces required for a transition
15 from the open position to the closed position.

5. A door lock according to claim 4, characterised in that the contact region (30) and/or the active region (22) are constructed in such a manner that forces occurring
20 between the contact region (30) and the active region (22) during a transition from the closed position to the open position essentially correspond to forces occurring during a transition from the open position to the closed position.

25 6. A door lock according to one of claims 4 to 5, characterised in that the contact region (30) is provided on a circumferential line of a rotatably mounted axle (28) or on a circumferential line of a bearing rotatable relative to an axle.

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7. A door lock according to one of claims 4 to 6, characterised in that the active region (22) comprises at least one bearing, which contacts the contact region (30) at least during a transition from the closed position to
35 the open position.

8. A door lock according to one of claims 4 to 7,
characterised in that the gripping device (18) is rotatable
by means of a bearing and/or is displaceable by means of a
closing lever (14), which is rotatable about an axle (12)
5 by means of a bearing.

9. A door lock according to one of claims 4 to 8,
characterised in that, for a transition from the closed
position to the open position, the contact region (30) and/
10 or the gripping device (18) are displaceable relative to
one another in such a manner that the cooperation of the
active region (22) and the contact region (30) is lifted.

10. A door lock according to claim 9, characterised in
15 that, for a transition from the open position to the closed
position, the contact region (30) and/or the gripping
device (18) are displaceable relative to one another in
such a manner that the contact between the active region
(22) and the contact region (30) is lifted.

20 11. A door lock for electrical household appliances, such
as washing machines, dishwashers and tumble driers, for
example, with:
- a frame (100), and
25 - a closing lever (104) which is mounted on the frame (100)
and can be reciprocated between a closed position and an
open position for the door lock,
characterised in that the closing lever (104) is mounted on
the frame (100) in such a manner that forces required
30 during a transition from the closed position to the open
position essentially correspond to forces required for a
transition from the open position to the closed position.

12. A door lock according to claim 11, characterised in
35 that the mounting of the closing lever (104) is constructed
in such a manner that forces occurring between the closing
lever (104) and the frame (100) during a transition from

the closed position to the open position essentially correspond to forces occurring during a transition from the open position to the closed position.

5 13. A door lock according to claim 11 or 12, characterised in that the closing lever (104) is mounted on the frame (100) by means of a bearing.

10 14. A door lock for electrical household appliances, such as washing machines, dishwashers and tumble driers, for example, with:

- a frame (100), and
- a tensioning lever (130), which is mounted on the frame (100) and can be reciprocated between a closed position and
15 an open position for the door lock, characterised in that
- the tensioning lever (130) is mounted on the frame (100) in such a manner that forces required during a transition from the closed position to the open position essentially
20 correspond to the forces required for a transition from the open position to the closed position.

15. A door lock according to claim 14, characterised in that the tensioning lever (130) is mounted on the frame
25 (100) in such a manner that forces occurring between the tensioning lever (130) and the frame (100) during a transition from the closed position to the open position essentially correspond to forces occurring during a transition from the open position to the closed position.

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16. A door lock according to claim 14 or 15, characterised in that the tensioning lever (130) is mounted on the frame (100) by means of a bearing.

35 17. A door lock according to one of claims 11 to 16, characterised in that a steering arm (106), which is guided at one end in articulated fashion with the closing lever

(104) and is guided at the other end on the tensioning lever (130), is connected to the closing lever (104) in such a manner that forces occurring between the steering arm (106) and the closing lever (104) during a transition
 5 from the closed position to the open position essentially correspond to forces occurring during a transition from the open position to the closed position.

18. A door lock according to claim 17, characterised in
 10 that the steering rod (106) is connected to the closing lever (104) by means of a bearing.

19. A door lock according to one of claims 11 to 18,
 characterised in that the guidance for the steering arm
 15 (106) on the tensioning lever (130) is constructed in such a manner that forces occurring between the steering arm (106) and the tensioning lever (130) during a transition from the closed position to the open position essentially
 correspond to forces occurring during a transition from the
 20 open position to the closed position.

20. A door lock according to claim 19, in which the steering arm (106) comprises crankpins (124), which are guided in a groove guide (140) of the tensioning lever
 25 (130), characterised in that bearings are arranged on the crankpins (124).

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